

Proposed In-Use Stationary Diesel Agricultural Engine Requirements

**Public Workshop
Sacramento
July 27, 2006**



California Environmental Protection Agency



Air Resources Board

Recap: April Public Workshop

- Purpose
 - ▶ Reduce diesel particulate matter (PM) exposure and risk
- Regulatory Background
 - ▶ Diesel Risk Management Plan
 - ▶ Airborne Toxic Control Measure for Stationary Compression Ignition Engines (ATCM)
 - ▶ District oxides of nitrogen (NOx) rules

Recap: April Public Workshop (continued)

- Applicability
 - ▶ Greater than 50 horsepower (hp) in-use stationary diesel ag. engines
 - ▶ Exceptions: ag. wind machines and ag. emergency standby generator sets
 - ▶ Expected to primarily affect ag. irrigation pump engines
 - 8,600 Statewide
 - diesel PM: 850 TPY
 - NOx: 12,800 TPY



Recap: April Public Workshop (continued)

- Proposed Requirements
 - ▶ Discussed relation of emission limits to Off-Road Compression Ignition Engine Certification Standards
 - ▶ Discussed engine replacement and other compliance options
 - ▶ Requested suggestions and discussed comments about reporting requirements
 - ▶ Also discussed: compliance deadlines, district implementation, residual risk concerns, emission inventory

Purpose of Today's Public Workshop

- Discuss Revisions in Response to Comments
- Introduce and Discuss Proposed Reporting Requirements
 - ▶ Integration of ATCM and AB 2588 “Hot Spots” Program requirements to address risk
- Next Steps

Revisions to the Proposal

- Moved Compliance Date for Noncertified (“Tier 0”) 175 to 750 HP In-Use Ag. Engines
 - ▶ From Dec. 31, 2009 to Dec. 31, 2010
 - ▶ Keeps incentive funding opportunities open



Proposed Noncertified In-Use Stationary Diesel Ag. Engine PM Emission Limits

Non-certified (Tier 0) Engine HP	Off-Road Engine Cert. Standard	Proposed ATCM Compliance
>50 - 99	Tier 3 or Interim 4 Jan. 1, 2008	Dec. 31, 2011
100 -174	Tier 3 Jan. 1, 2007	Dec. 31, 2010
175 - 750	Tier 3 Jan. 1, 2006	Revised to Dec. 31, 2010
>750	Tier 4 Jan. 1, 2011	Dec. 31, 2014 ₇

Revisions to the Proposal (continued)

- Clarified that Tier 1 and Tier 2 In-Use Ag. Engine Must Meet Both New and Future In-Use Provisions
 - ▶ Avoids conflict with ATCM's definition of "new" engine
- Clarified that "Date of Installation" Is Limited to the In-Use Ag. Engine Model Year Plus 1 Year

Proposed T1,T2-Certified In-Use Stationary Diesel Ag. Engine PM Emission Limits Unchanged

Tier 1 or Tier 2 Certified Engine HP	Off-Road Engine Cert. Standard	Proposed ATCM Compliance
>50 - 174	Tier 4 Jan. 1, 2012	Dec. 31, 2015*
≥175	Tier 4 Jan. 1, 2011	Dec. 31, 2014*

* or 12 years after initial installation

More Stringent PM Emission Limits Near Residential Areas

- Tier 3 Engines May Result in Unacceptable Cancer Risk for Engines Located Very Close to a Neighboring Residence or Residences (i.e., Off-Site Receptors)
- Compliance Alternatives:
 - ▶ Electrify
 - ▶ 0.01 g/bhp-hr PM Tier 4 engine
 - ▶ Tier 3 engine plus DPF
 - ▶ Spark-ignited engine
 - ▶ Alternative fuels
 - ▶ Relocate Engine



Proposed Reporting Requirements

- Purpose of Reporting:
 - ▶ Outreach,
 - ▶ Target Incentive Funding,
 - ▶ Promote Equity
- No Reporting Required If District Already Has the Information



Proposed Reporting Requirements: Initial Notification Submittal

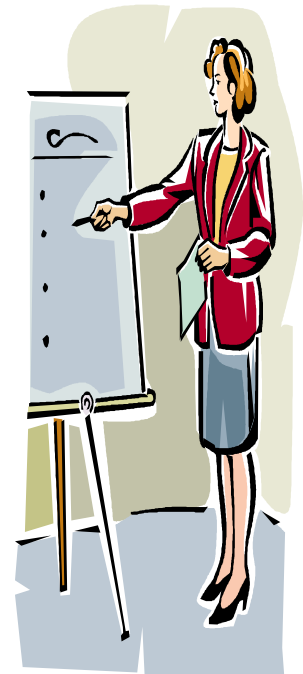
- General Reporting Requirements
 - ▶ Owner/Operator contact information
 - ▶ Engine make, model, serial number, size
 - ▶ General description of engine location
 - ▶ Estimated engine operating hours and fuel use (if non-diesel fuel is used)
- Reporting for Engines Near Receptors
 - ▶ Estimated distance and direction from engine to receptor
 - ▶ Specific engine and/or receptor location

Draft ATCM Concept for Addressing Residual Risk for Engines Located Near Off-Site Receptors

- Designed to Address AB 2588 “Hot Spots” Program
- District Conducts Risk Screen for Tier 0 and Tier 3 Engines
- If Estimated Risk Exceeds 10 in a Million, a Tier 3 Engine May Not Be Sufficiently Health Protective
- Engine Owner/Operator May Contract for Independent Health Risk Assessment to Verify Risk Screen Results

Next Steps

- Sept. 2006 - Staff Report, 45-Day Public Review and Comment
- Oct. 19, 2006 - Board Hearing
- Spring 2007 - Office of Administrative Law Review, Effective



Further Information

- Webpage: <http://www.arb.ca.gov/diesel/ag/inuseag.htm>
- List Serve: <http://www.arb.ca.gov/listserv/inuseag.htm>
- Richard Boyd, Manager, Process Evaluation Section, (916) 322-8285 or rboyd@arb.ca.gov; or
- Barbara Cook, (916) 323-0440 or bcook@arb.ca.gov



Sacramento Webcast Audience Questions and Comments

- E-mail Address:

auditorium@calepa.ca.gov

Other Proposed Amendments

Proposed Amendments

- The proposed amendments are intended to resolve specific implementation issues.

Rolling Blackout Reduction Program Changes

- Amend definition of a Rolling Blackout Reduction Program (RBRP).
 - ▶ **Remove specific numeric references in the definition that are subject to change by the PUC.**
 - **Add new reference to PUC Tariffs.**

Fuel Reporting Requirements

- **Reporting Requirements for Emergency Standby Engines**
 - ▶ **Allow compliance through maintaining adequate purchase records of complying fuel.**
 - ▶ **Require preparation of monthly reports.**

Maintenance and Testing

- Propose amendments to the definition of Maintenance and Testing
 - ▶ **New subsection for additional operations resulting from testing engines that have experienced equipment breakdown or failure during scheduled or routine maintenance as emergency use.**
 - **District approval required**

CARB Diesel

- Propose amendments to the “Alternative Diesel Fuel” and “CARB Diesel Fuel” definitions.
 - ▶ **Modify alternative diesel fuel definition to exclude biodiesel blends that meet CARB diesel fuel requirements.**
 - ▶ **Redefine CARB diesel fuel to be consistent with the existing CARB diesel fuel regulations.**

Sell-Through Provision

- Allow distributors and dealers a sell-through period for CI engines <175 bhp
 - ▶ **Greater flexibility to reduce existing engine inventory.**
 - **Applicable if engine is delivered or ordered 3 months prior to and delivered no more than three months after the effective date of the new engine standard.**
 - **District approval required**

Clarify 0.01 g/bhp-hr PM Standard

- Clarify technologies acceptable to achieve the 0.01 g/bhp-hr Diesel PM emission standard.
 - ▶ Consider the diesel PM emission standard met
 - Engine certified to meet the 0.15 g/bhp-hr PM emission standard plus a
 - Level 3 verified control strategy

Launch Tracking at Vandenberg AFB's CT Sites

- Clarify “Initial Launch” to mean any pre launch system checks and post launch tracking operations at CT sites that occur on the day-of-launch only.
 - ▶ Each emergency standby engine will be limited to a maximum of 100 hours per year for maintenance and testing.
 - ▶ Emergency standby CI engines at CT sites will be given until December 31, 2009 to meet the 0.01 g/bhp-hr PM emissions standard.

Test Engine Exemption

- New “test engine” exemption for stationary engines located at “research and development (R&D) facilities.”
 - ▶ **District approval required**

Non-Substantive Changes

- Clarify the ATCM does not apply to:
 - **Portable CI engines that provide the motive power to on-road engines**
 - **CI engines used for propulsion of marine vessels or auxiliary engines used on marine vessels**
 - **Agricultural wind machines.**
- Move the exemptions in the ATCM for portable, marine, and agricultural wind machines to a new “Applicability section.
- Other minor changes

Additional Information

- **Contacts to discuss issues and/or suggest changes to non-agricultural changes to the ATCM.**
 - ▶ **Erik White, Manager, Technical Analysis Section**
 - **(916) 327-7213**
 - **ewhite@arb.ca.gov**
 - ▶ **Ron Hand, staff lead**
 - **(916) 327-6683**
 - **rhand@arb.ca.gov**